

**What is Claimed:**

1. A method of screening a racehorse candidate, said method comprising:
  - (i) obtaining a measurement of the width of the ventricular septal wall of said racehorse candidate; and
  - (ii) comparing said measurement to a collection of measurements from a group of horses, wherein said collection of measurements comprises ventricular septal wall width measurements for horses of about the same age, sex, and weight as said racehorse candidate.
2. The method of claim 1, further comprising the step of selecting said racehorse candidate if it has a ventricular septal wall width that is greater than the mean ventricular septal wall width from said collection of measurements.
3. The method of claim 1, the method further comprising the step of selecting said racehorse candidate if it has a ventricular septal wall width that is in the 75<sup>th</sup> percentile or higher when compared to the ventricular septal wall width measurements from said collection of measurements.
4. The method of claim 1, wherein said screening takes place at an auction.
5. The method of claim 1, the method further comprising the step of:
  - (iii) obtaining a measurement of the cross-sectional area of the left ventricle in diastole of said racehorse candidate;wherein said collection of measurements further comprises left ventricle in diastole cross-sectional area measurements for horses of about the same age, sex, and weight as said racehorse candidate.
6. The method of claim 5, further comprising the step of selecting said racehorse candidate if it has a ventricular septal wall width and left ventricle in diastole cross sectional area that is greater than the mean ventricular septal wall width and left ventricle in diastole cross-sectional area measurement from said collection of measurements.

7. The method of claim 5, further comprising the step of selecting said racehorse candidate if it has a ventricular septal wall width and a left ventricle in diastole cross sectional area measurement that is in the 75<sup>th</sup> percentile or higher when compared to the ventricular septal wall width and left ventricle in diastole cross sectional area measurements from said collection of measurements.
8. The method of claim 1, wherein said ventricular septal wall width measurement is obtained by measuring, in a left parasternal short-axis view obtained at end diastole, the distance from the endocardial edge of the right ventricular free wall, at the point where the wall meets the interventricular septum, through the interventricular septum, to the point of attachment of the moderator band in the left ventricle.
9. The method of claim 1, wherein said measurement is obtained from a left parasternal short axis echocardiogram of the left ventricle of said racehorse.
10. The method of claim 5, wherein said left ventricle in diastole cross sectional area measurement is obtained by measuring the circumference of the left ventricular chamber.
11. The method of claim 5, wherein said left ventricle in diastole cross sectional area measurement is obtained from a left parasternal short-axis echocardiogram of the left ventricle of said racehorse.
12. The method of claim 1, the method further comprising the steps of :  
(iii) obtaining a measurement of the cross-sectional area of the left ventricle in systole of said racehorse candidate;  
wherein said collection of measurements further comprises left ventricle in systole cross-sectional area measurements of horses of about the same age, sex, and weight as said racehorse candidate.
13. The method of claim 12, further comprising the step of selecting said racehorse candidate if it has a ventricular septal wall width and left ventricle in systole cross sectional area that is greater than the mean ventricular septal wall width and left ventricle in systole cross-sectional area measurement from said collection of measurements.

14. The method of claim 12, further comprising the step of selecting said racehorse candidate if it has a ventricular septal wall width and a left ventricle in systole cross sectional area measurement that is in the 75<sup>th</sup> percentile or higher when compared to the ventricular septal wall width and left ventricle in systole cross sectional area measurements from said collection of measurements.

15. The method of claim 1, the method further comprising the steps of :

(iii) obtaining a measurement of the cross-sectional area of the spleen of said racehorse candidate;

wherein said collection of measurements further comprises splenic cross-sectional area measurements of horses of about the same age, sex, and weight as said racehorse candidate.

16. The method of claim 12, further comprising the step of selecting said racehorse candidate if it has a ventricular septal wall width and splenic cross sectional area that is greater than the mean ventricular septal wall width and left ventricle in systole cross-sectional area measurement from said collection of measurements.

17. The method of claim 12, further comprising the step of selecting said racehorse candidate if it has a ventricular septal wall width and a splenic sectional area measurement that is in the 75<sup>th</sup> percentile or higher when compared to the ventricular septal wall width and splenic cross sectional area measurements from said collection of measurements.

18. The method of claim 1, the method further comprising the steps of :

(iii) obtaining a measurement of the height X weight of said racehorse candidate;

wherein said collection of measurements further comprises height X weight measurements from horses of about the same age and sex as said racehorse candidate.

19. The method of claim 18, further comprising the step of selecting said racehorse candidate if both the ventricular septal wall width and the height X weight measurement are greater than the mean ventricular septal wall width and height X weight measurements from said collection of measurements.

20. The method of claim 18, further comprising the step of selecting said racehorse candidate if it has both a ventricular septal wall width and a height X weight measurement that is in the 75<sup>th</sup> percentile or higher when compared to the ventricular septal wall width and height and weight measurements from said collection of measurements.
21. The method of claim 18, the method further comprising the steps of :  
(iii) obtaining measurements of the cross-sectional area of the left ventricle in systole of said racehorse candidate;  
wherein said collection of measurements further comprises left ventricle in systole cross-sectional area measurements from horses of about the same age, sex, and weight as said racehorse candidate.
22. The method of claim 21, the method further comprising the step of selecting said racehorse candidate if it has a ventricular septal wall width, a left ventricle in systole cross sectional area, and a height X weight measurement that is greater than the mean ventricular septal wall width, left ventricle in systole cross sectional area, and height X weight measurements from said collection of measurements.
23. The method of claim 21, the method further comprising the step of selecting said racehorse candidate if it has a ventricular septal wall width, a left ventricle in systole cross sectional area, and a height X weight measurement that is in the 75<sup>th</sup> percentile or higher when compared to corresponding measurements from said collection of measurements.
24. A method of screening a racehorse candidate, said method comprising:  
(i) obtaining a measurement of the cross-sectional area of the spleen of said racehorse candidate;  
(ii) comparing said measurement to a collection of measurements from a group of horses, wherein said collection of measurements comprises splenic cross-sectional area measurements from horses of about the same age, sex, and weight as said racehorse candidate.
25. The method of claim 24, further comprising the step of selecting said racehorse candidate if it has a splenic cross sectional area that is greater than the mean splenic cross sectional area from said collection of measurements.

26. The method of claim 24, the method further comprising the step of selecting said racehorse candidate if it has a splenic cross sectional area that is in the 75<sup>th</sup> percentile or higher when compared to the splenic cross sectional areas from said collection of measurements.
27. The method of claim 24, the method further comprising the step of:  
(iii) obtaining a measurement of the cross-sectional area of the left ventricle in systole of said racehorse candidate;  
wherein said collection of measurements further comprises left ventricle in diastole cross-sectional area measurements from horses of about the same age, sex, and weight as said racehorse candidate.
28. The method of claim 1, wherein said racehorse candidate is a yearling or two year old.
29. A method of screening a racehorse candidate to select a high earner router, said method comprising:  
(i) obtaining a measurement of the cross-sectional area of the left ventricle in systole, the cross-sectional area of the left ventricle in diastole, or the percent change in ventricular area per stroke of said racehorse candidate;  
(ii) obtaining a measurement of the height X weight of said racehorse candidate;  
(iii) comparing said measurements from said racehorse candidate to a collection of measurements from a group of horses, wherein said collection of measurements comprises height X weight measurements and cross-sectional area of the left ventricle in systole measurements, cross-sectional area of the left ventricle in diastole measurements, or percent change in ventricular area per stroke measurements from horses of the same age, weight and sex as said racehorse candidate.
30. A method for maintaining a horse registry system for identifying the potential racing ability of a candidate racehorse, the method comprising:  
(i) obtaining measurements from a group of horses;  
(ii) standardizing said measurements for age, sex, and weight;  
(iii) classifying said horses according to their racing abilities; and

(iv) determining the relationship between the measurements of said horses and their racing ability.

31. The method of claim 30, wherein said measurements are selected from the group consisting of ventricular septal wall width, height, weight, cross-sectional area of the left ventricle in diastole, cross-sectional area of the left ventricle in systole, cross-sectional area of the spleen, and percent stroke volume.